

**Notice of Allowability**

Application No.

10/763,888

Applicant(s)

MCEWAN, THOMAS E.

Examiner

Sanh D. Phu

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 1/5/2007.
2. ☒ The allowed claim(s) is/are 1-17.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08);  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

### REASONS FOR ALLOWANCE

1. This Office Action is responsive to the Response filed on 1/5/07.
2. Claims 1-17 are allowed.
3. The following is an examiner's statement of reasons for allowance:

-Regarding to independent claim 1, none of prior art of record teaches or suggests an RF transceiver comprising a transistor of generating an RF signal; a substrate; and a lead having a length that is 0.1 times the signal wavelength of the RF signal wherein the lead connects the transistor to the substrate and radiates RF energy into ,or receives energy from, free space such that the lead serves as the antenna for the transceiver.

-Regarding to independent claim 11, none of prior art of record teaches or suggests a method of radiating RF energy utilizing leads from a transistor as antennas, the method comprising procedures of generating an RF signal with a RF transistor, the RF transistor located on a substrate; and outputting the RF signal through a lead wherein the lead connects the transistor to the substrate and radiates the RF energy to free space. McEwan (6,191,724), previously cited, teaches the method except he fails to teach that the RF transistor has a lead

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wherein the lead connects the transistor to the substrate and radiates the RF energy to free space, as claimed. In McEwan, one end of the lead connects the transistor to the substrate and the other end of the lead connect to a quarter-wave monopole antenna, wherein the antenna receives the RF signal generated from the RF transistor via the lead and the antenna radiates the RF signal to free space whereas the lead does not radiate the RF energy to free space. It would not have been obvious for a person skilled in the art to implement McEwan in view of other prior art of record for leading such the implementation to the claimed invention.

—Regarding to independent claim 13, none of prior art of record teaches or suggests method of radiating or receiving RF energy, wherein the RF energy is generated by a signal having an operating frequency and the operating frequency defining a corresponding wavelength, the method comprising: providing a substrate having a first side, a second side, and having a thickness that is one-quarter of the wavelength; metallizing the first side of the substrate to form a quarter-wave reflector; positioning a RF transistor on the

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second side of the substrate; and radiating RF energy from the transistor at the operating frequency using gain provided by the quarter-wave reflector.

–Regarding to independent claim 15, none of prior art of record teaches or suggests a method of radiating comprising: radiating RF energy from a transistor towards a free-space; and positioning a planar filter between the RF transistor and the free space to filter a component of the radiated RF energy.

–Regarding to independent claim 16, none of prior art of record teaches or suggests a method of radiating RF energy, comprising: positioning an RF transistor on a substrate of thickness  $T$ , wherein the substrate has a front side and a back side, with the transistor on the front side; positioning a metallic reflecting surface on the backside of the substrate; radiating RF energy having a quarter wavelength equal to  $T$  from the transistor to the backside through the substrate; and reflecting the RF energy from the metallic reflecting surface back through the substrate and out into free space.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should

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preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### *Conclusion*

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sanh D. Phu whose telephone number is (571)272-7857. The examiner can normally be reached on M-Th from 7:00-17:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew D. Anderson can be reached on (571) 272-4177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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2/5/07



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PATENT EXAMINER

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